Wind Energy Environmental Impact Assessment Training Course

Professional Development Training Course Outline

Category	Renewable Energy	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Wind Energy Environmental Impact Assessment Training Course provides a practical, industry-focused framework for professionals involved in the planning, development, assessment, permitting, construction, and monitoring of onshore and offshore wind energy projects. As the global energy transition accelerates, wind power is becoming a strategic component of renewable energy deployment, net-zero pathways, climate resilience, energy security, and sustainable infrastructure. The course develops advanced capability in Environmental Impact Assessment, Strategic Environmental Assessment, biodiversity risk management, climate impact assessment, cumulative impact assessment, environmental permitting, stakeholder engagement, spatial planning, and ESG compliance. Participants explore how to identify, predict, evaluate, mitigate, monitor, and manage environmental and social impacts throughout the wind project lifecycle, from site selection and feasibility studies through construction, operation, repowering, and decommissioning.

Designed around current industry priorities, the programme connects wind resource assessment, environmental baseline studies, ecological surveys, bird and bat collision risk, marine ecology, noise and shadow flicker, landscape and visual impact, hydrology, cultural heritage, community impacts, climate risk, and cumulative effects with practical EIA decision-making. Participants learn to apply mitigation hierarchy, GIS-based spatial analysis, environmental monitoring, biodiversity net gain principles, stakeholder consultation, adaptive management, environmental management plans, and ESG reporting to real-world wind projects. Through case studies and scenario-based exercises, learners develop the confidence to produce defensible environmental assessments and support responsible renewable energy development, regulatory compliance, biodiversity conservation, social acceptance, and sustainable project delivery.

Programme Curriculum

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Course Duration

5 days

Course Objectives

By the end of the training, participants will be able to:

1. Apply Environmental Impact Assessment (EIA) principles to modern wind energy projects.
2. Evaluate biodiversity, habitat, bird, and bat risks associated with wind farms.
3. Conduct effective environmental scoping, baseline assessment, and impact prediction.
4. Assess cumulative environmental impacts across renewable energy development zones.
5. Apply GIS, remote sensing, spatial planning, and geospatial analytics to wind EIA.
6. Develop practical mitigation hierarchy and biodiversity management strategies.
7. Evaluate noise, shadow flicker, landscape, visual, and amenity impacts.
8. Assess offshore wind impacts on marine ecosystems, fisheries, and coastal communities.
9. Integrate climate change risk, carbon management, and climate resilience into EIA.
10. Design effective Environmental and Social Management Plans (ESMPs) and monitoring programmes.
11. Strengthen stakeholder engagement, community consultation, and social licence to operate.
12. Understand environmental permitting, ESG, sustainability, and regulatory compliance requirements.
13. Apply international best practice, adaptive management, environmental monitoring, and responsible renewable-energy principles to project decision-making.

Target Audience

1. Environmental consultants and EIA practitioners
2. Renewable energy and wind project developers
3. Environmental managers and sustainability professionals

4. Government regulators and environmental authorities
5. Engineers, planners, architects, and project managers
6. Ecologists, biodiversity specialists, and conservation professionals
7. ESG, climate-risk, and corporate sustainability specialists
8. Researchers, academics, NGOs, and renewable-energy professionals

Training Modules

Module 1: Wind Energy Development and EIA Fundamentals

- Wind energy lifecycle
- EIA framework
- Renewable energy sustainability
- Regulatory landscape
- **Case Study:** EIA decision-making for a proposed large-scale **onshore wind farm** and identification of key environmental constraints.

Module 2: Environmental Baseline Studies and Impact Identification

- Designing baseline environmental surveys for terrestrial, freshwater, coastal, and offshore environments.
- Assessing soil, geology, hydrology, air quality, water resources, and ecosystem services.
- Identifying direct, indirect, induced, temporary, permanent, and cumulative impacts.
- Applying significance criteria, impact matrices, sensitivity analysis, and risk-based assessment.
- **Case Study:** Developing a baseline assessment and impact register for a wind project located near sensitive habitats.

Module 3: Biodiversity, Birds, Bats, and Ecological Risk

- Assessing avian collision risk, migration routes, nesting areas, and sensitive bird populations.
- Evaluating bat activity, roosts, habitats, and turbine-related ecological risks.
- Applying the mitigation hierarchy.
- Integrating biodiversity conservation, habitat connectivity, ecological monitoring, and biodiversity net gain.
- **Case Study:** Applying bird and bat monitoring data to determine turbine micro-siting and operational mitigation measures.

Module 4: Landscape, Noise, Shadow Flicker, and Visual Impact

- Assessing landscape character, visual receptors, viewpoints, and scenic sensitivity.
- Evaluating turbine noise, construction noise, vibration, and community amenity.
- Understanding shadow flicker, lighting, aviation considerations, and residential receptors.
- Applying visualisation, modelling, GIS, and spatial analysis to impact assessment.
- **Case Study:** Managing community concerns surrounding landscape and noise impacts from a wind farm near residential areas.

Module 5: Offshore Wind Environmental Impact Assessment

- Assessing marine biodiversity, seabed habitats, fisheries, marine mammals, birds, and migratory species.
- Evaluating impacts from foundations, subsea cables, vessel activity, construction noise, and offshore operations.
- Understanding coastal processes, sediment transport, navigation, fisheries, and marine spatial planning.

- Integrating cumulative impact assessment for multiple offshore renewable-energy developments.
- **Case Study:** Environmental assessment of an **offshore wind farm and subsea transmission corridor** in a multi-use marine environment.

Module 6: Social, Community, Climate, and ESG Impacts

- Conducting social impact assessment and stakeholder engagement throughout the project lifecycle.
- Managing community concerns, land use, livelihoods, visual impacts, and benefit-sharing.
- Integrating climate risk, adaptation, resilience, carbon reduction, and climate-related hazards.
- Connecting EIA with ESG, sustainability reporting, responsible investment, and corporate accountability.
- **Case Study:** Designing a stakeholder engagement and community-benefit strategy for a wind development facing local opposition.

Module 7: Mitigation, Environmental Management, and Monitoring

- Developing Environmental and Social Management Plans (ESMPs) and project-specific mitigation measures.
- Establishing environmental monitoring indicators, KPIs, thresholds, audits, and reporting systems.
- Applying adaptive management where environmental conditions or project impacts change over time.
- Integrating construction environmental management, restoration, rehabilitation, and decommissioning planning.
- **Case Study:** Creating an environmental monitoring programme to manage biodiversity and community impacts during wind-farm construction and operation.

Module 8: Advanced EIA, Compliance, and Professional Application

- Preparing high-quality EIA reports, environmental statements, technical appendices, and regulatory submissions.
- Applying GIS, remote sensing, data analytics, environmental modelling, and digital EIA workflows.
- Evaluating cumulative effects, alternatives analysis, climate scenarios, and strategic environmental considerations.
- Strengthening environmental compliance, auditing, due diligence, ESG assurance, and regulatory reporting.
- **Case Study:** Complete simulated EIA review for a utility-scale wind project, from **screening and scoping through approval, mitigation, and monitoring**.

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0

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